Name_____ Date_____

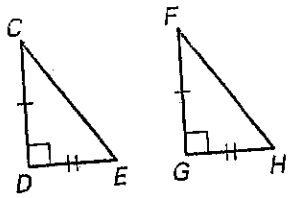
204

Review for Quiz on Proving Δs Congruent

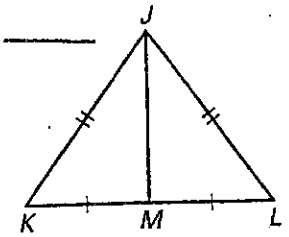
A.

For #s 1-30, determine if the Δs are ≅. If they are, then give the reason why.
SSS, SAS, ASA, AAS, OR HL
Remember to mark reflexive and vertical angles.

1. _____




2. _____

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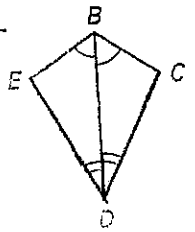


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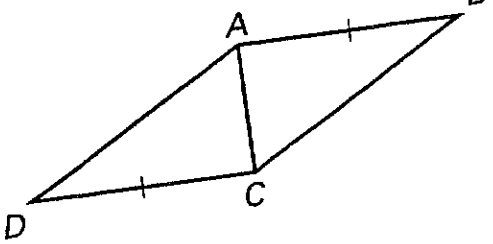


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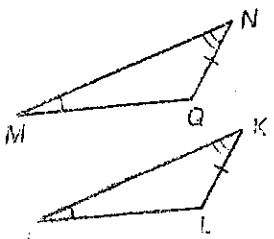


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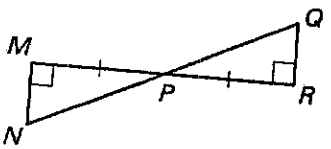


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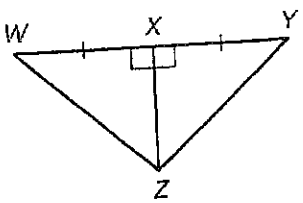


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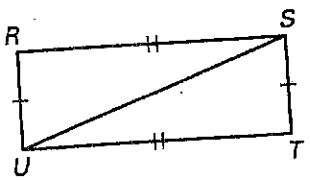


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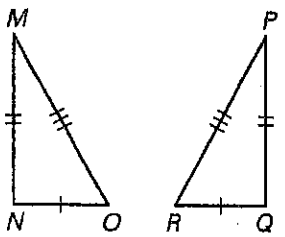
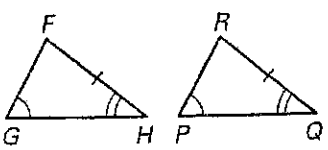



10. _____

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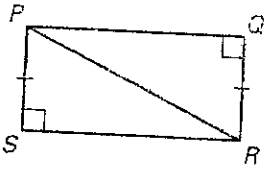


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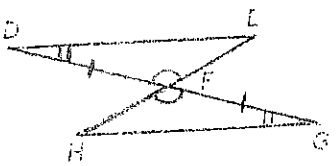

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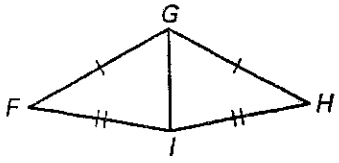


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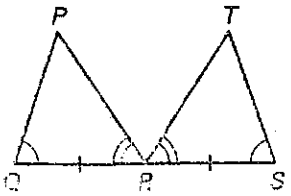


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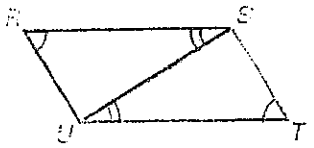


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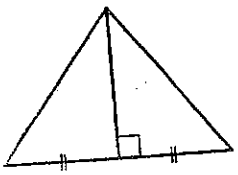

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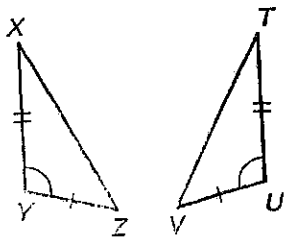


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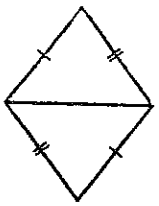

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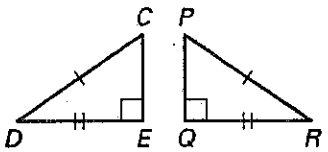


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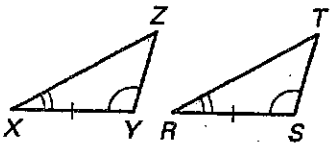


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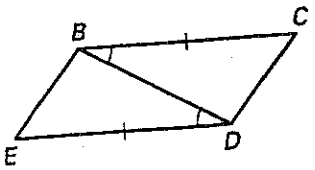


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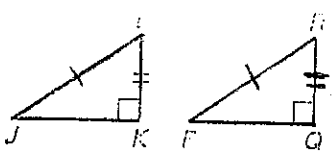


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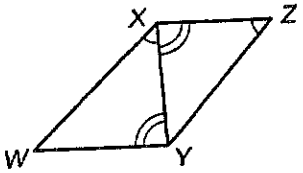


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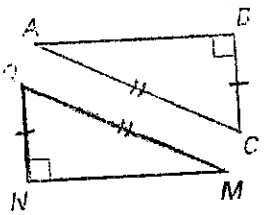


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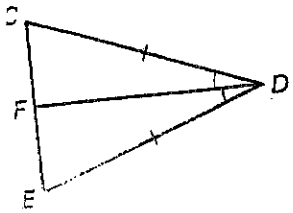


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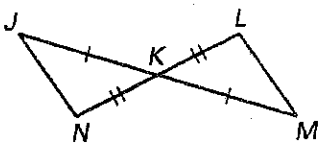


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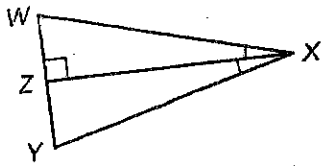


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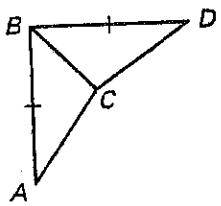


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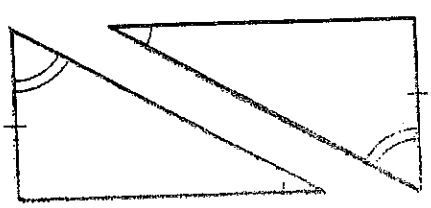
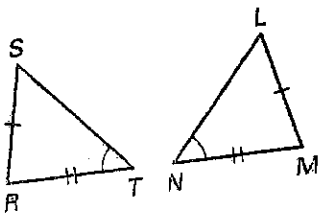


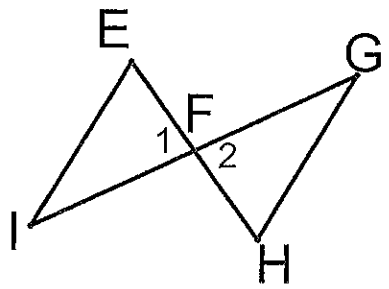
30. _____



**Possible Reasons**: Reflexive; vertical angles are ≅; def. of midpoint; def. of ∠ bisector; If ||, alt. int. ∠s are ≅; SSS; SAS; ASA; AAS; or CPCTC

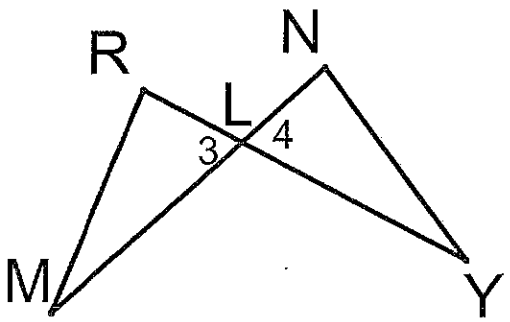
B.

Write the following proofs. Don't forget to mark the diagrams.



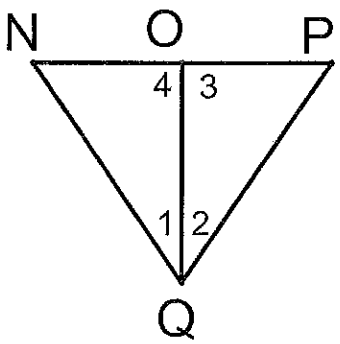

1. Given: F is the midpoint of $\overline{EH}$ and $\overline{GI}$
Prove: ΔEFI ≅ Δ HFG

| Statements | Reasons |
|---|---|
| 1. ~ | 1. |
| 2. EF = HF | 2. |
| 3. IF = GF | 3. |
| 4. ∠1 ≅ ∠2 | 4. |
| 5. ΔEFI ≅ ΔHFG | 5. |




2. Given: ∠R ≅ ∠N; RM = NY
Prove: ΔRLM ≅ Δ NLY

| Statements | Reasons |
|---|---|
| 1. ~ | 1. |
| 2. ∠3≅ ∠4 | 2. |
| 3. ΔRLM ≅ ΔNLY | 3. |

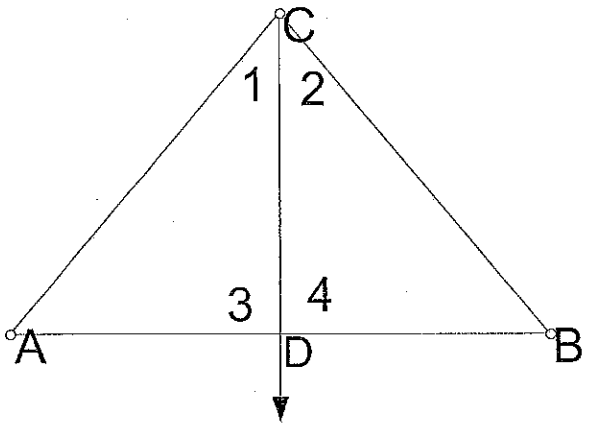



3. Given: $\overline{OQ}$ bisects ∠NQP and ∠NOP
Prove: ΔNOQ ≅ Δ POQ

| Statements | Reasons |
|---|---|
| 1. ~ | 1. |
| 2. ∠3≅ ∠4 | 2. |
| 3. ∠1≅ ∠2 | 3. |
| 4. OQ = OQ | 4. |
| 5. ΔNOQ ≅ ΔPOQ | 5. |

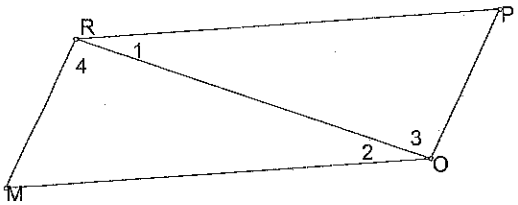
**Possible Reasons**: Reflexive; vertical angles are ≅; def. of midpoint; def. of ∠ bisector; If ||, alt. int. ∠s are ≅; SSS; SAS; ASA; AAS; or CPCTC

4. Given: AC = BC; D is the midpoint of $\overline{AB}$
Prove: ∠1 ≅ ∠2



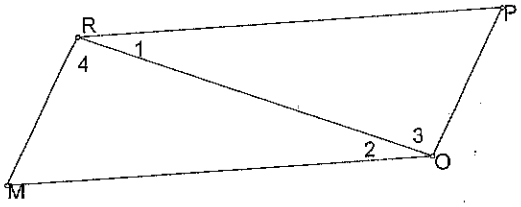

| Statements | Reasons |
|---|---|
| 1. ~ | 1. |
| 2. AD = BD | 2. |
| 3. CD = CD | 3. |
| 4. ΔADC ≅ ΔBDC | 4. |
| 5. ∠1 ≅ ∠2 | 5. |

5. Given: MO = PR; RM = OP
Prove: ∠M ≅ ∠P




| Statements | Reasons |
|---|---|
| 1. ~ | 1. |
| 2. RO = RO | 2. |
| 3. ΔRMO ≅ ΔOPR | 3. |
| 4. ∠M ≅ ∠P | 4. |

6. Given: $\overline{RM}$ || $\overline{OP}$; $\overline{RP}$ || $\overline{MO}$
Prove: MO = PR




| Statements | Reasons |
|---|---|
| 1. ~ | 1. |
| 2. ∠3≅ ∠4 | 2. |
| 3. ∠1≅ ∠2 | 3. |
| 4. RO = RO | 4. |
| 5. ΔRMO ≅ ΔOPR | 5. |
| 6. MO = PR | 6. |